Hygiene and Sunday.

Among the questions treated of at the recent congresses in Paris, says the London *Lancet*, that of the observance of the sabbath as a day of rest was not the least interesting. The congress on this subject was presided over by M. Léon Say, who remarked that this rest, which several religions rendered obligatory, is a law of nature, and consequently a law of hygiene, the excellence of which has long been demonstrated, although it is not to be found in all national codes. The resting on the seventh day is of biblical origin, and the custom of counting the days by seven was formerly the rule among the most diverse races, — in India, as among the Celts, in China as well as in Arabia. Now that hygiene has become a positive science, it confirms the moral and material necessity for a temporary rest on the seventh day.

Several reports were presented to the congress, and physicians, professors, philosophers, and hygienists are in accord on this point. All, without exception, support for workers of all classes and of all ages a weekly day of rest, which should even be made obligatory. It may here be noted that in 1881 this subject was opened to competition by the Swiss Government for a prize, which was awarded to Dr. Niemeyer of Leipzig. The subject was brilliantly treated by Dr. Niemeyer, who observed that the dominical rest is the first commandment of hygiene, which should be followed to obtain a peaceful and continued amelioration of society, and in this respect it is as much a rational institution as a religious one.

The following is the summary of the conclusions as voted by the great majority of the members of the congress: "Rest on Sunday is possible in varying degrees in all industries. Sunday is the day which best suits the employer and employed, both as regards the individual himself and his family, and it is well that the day of rest should be as much as possible the same for all. When the Sunday rest is impracticable for certain reasons, it should be replaced by some other day, so that the workman may have fifty-two days' rest in the year as equally divided as possible. This rest permits man to produce considerably more and better work, inasmuch as it contributes to maintain his zeal and to restore his physical forces."

ITALIAN SAUSAGES. — The excitement caused throughout Italy by the detection of extensive frauds in the Bologna-sausage manufacture is spreading. Other cities, notably Florence, are demanding an immediate inspection of the same articles of food as are vended in Italian warehouses. The public, says the *Nazione* of that city, are entitled to some such inquiry in their behalf as has just yielded such startling results in Bologna. Instead of the pig's flesh, popularly supposed to form the main ingredient in the Italian sausage, horse-flesh is that which is really used, — horse-flesh moreover, of more than dubious origin, taken from animals that have died of infectious disease, and even that in an advanced state of decomposition. According to the *Tribuna*, there has been collusion between certain sausage-manufacturing firms and the veterinary authority, the latter winking at frauds which it ought to have exposed. The new powers conferred by the Codice Sanitario, indeed, are finding material for their exercise in quarters hitherto above suspicion; in an industry, to wit, which has long been one of the special boasts of Italy.

NOTES AND NEWS.

THE municipality of Paris is considering the feasibility and expediency of increasing the water-supply for that city by impounding the head waters of the Vigne and Verneuil. This would admit of increasing the water-supply to fifty-five gallons per head per day, the present supply being only twenty-two gallons per head per day, besides giving a much purer water for domestic uses.

— It may prove of interest briefly to describe a series of models that have recently been loaned to the Johns Hopkins University by E. H. Butler & Co. of Philadelphia. The set includes North America, South America, Europe, Asia, Africa, the United States, and Pennsylvania. The models are the work of the Mindeleff Brothers of the United States Geological Survey, who prepared them expressly for the publishers. They have been used in illustrating the geographies recently published by that firm. The models surpass in elaborateness any that have hitherto been constructed, and, by agreement with the publishers, they remain the only set, as no copies will be made of the present series. They are made of plaster-of-Paris, and the approximate dimensions are four feet by three feet and six inches. The land is represented in buff on a blue ground, thus assuring a sharp outline to each continent and its accompanying islands. The mountainous portions stand out in bold relief, so that the chief elevations and depressions of the continents are clearly emphasized. The prominent river courses, with their characteristic channels of broad valley or narrow cañon, are plainly shown. One of the most striking features in the topography is the distinctness with which the chief drainage basins are outlined. The extent of the Mississippi basin, for example, and the character of its topography are at once apparent. On the enlarged relief of the United States more details are added than were possible on the model of North America, while on that of Pennsylvania the characteristic features of Appalachian topography are plainly exhibited. The great importance of such models for purposes of illustration in physical geography cannot be over-estimated. The value of the entire set is not far from $2,000. Mr. J. A. Shriver placed the sum of $175 at the disposal of the Geological Department for the purchase of models and maps relating to physical geography. A set of thirty relief maps, designed by Professor W. M. Davis of Harvard University, to illustrate the development of the more prominent features in topography, has already been acquired, and a second set, showing the associations of topography with geological structure, prepared by Professor N. S. Shaler, has been ordered. In addition to these, several maps relating to special points in physical geography are in course of preparation. A large model of a unique region in Pennsylvania, showing the effect of valley carving on anticlinal and synclinal structure, is at present under construction by a member of the Pennsylvania Geological survey.

— Emin Pacha, who received serious injuries from a fall soon after reaching the coast, is now in fair way to recovery.

— The slight improvements made from time to time in incandescent electric lamps tend mainly in the direction of giving them a longer life. A lamp of the Woodhouse & Rawson make, as reported from Taunton, England, is credited with a service of 10,608 hours before giving out.

— The fifth annual meeting of the Indiana Academy of Science, to be held at Indianapolis, Dec. 30 and 31, has been announced. The officers and *ex-officio* executive committee of the academy are John C. Branner, president; T. C. Mendenhall, Oliver P. Hay, John L. Campbell, vice-presidents; Amos W. Butler, secretary; Oliver P. Jenkins, treasurer; David S. Jordan, John M. Coulter, J. P. D. John, ex-presidents. The list of papers is as follows: "Explorations of the United States Fish Commission in Colorado and Utah," by David S. Jordan; "Explorations of the United States Fish Commission Steamer 'Albatross' in the Pacific Ocean," by Charles H. Gilbert; "Explorations of the United States Fish Commission in Missouri," by Frank M. Drew and Louis Rettger; "Preliminary Note on the Fishes of the Sandwich Islands," by O. P. Jenkins; "Description of a New Species of Rhinoptera from the Gulf of California" (by title), by B. W. Evermann and O. P. Jenkins; "Some Notes on Indiana Reptiles and Batrachians," by A. W. Butler; "Some Rare Batrachians," by W. S. Blatchley; "Fishes of Putnam County," by O. P. Jenkins; "Some Habits of the Crayfish," by C. W. Hargitt; "The Occurrence of the Badger in Indiana," by Amos W. Butler; "Fishes in the Yellowstone Park," by David S. Jordan; "Notes on Some Fishes from the West Coast of Africa, collected by Carl Stecklemann," by O. P. Jenkins; "Morphology of Siphonophores," by Louis Rettger "Notes upon the Economic Phases of Entomology and Ornithology," by C. W. Hargitt; "Observations on the Destruction of Birds by Storms," by A. W. Butler; "Notes on Indiana Butterflies," by Albert J. Woolman; "Investigations on Relation between the Intensity of Stimulus and Re-action Time," by W. J. Bryan; "Incandescent Gas-Lighting," by W. DeM. Hooper; "Dangers of the Electric Circuit," by John L. Campbell; "Apparatus for the Determination of Power Consumption in Friction and

the Cutting of Metals," "Thomson's Portable Magnetostatic Electrical Measuring Instruments of Long Range," and "On the Determination of the Elasticity Constants of Materials by the Deflection Method," by Thomas Gray; "Preliminary Report on the Changes in Density of Wires on Stretching," by Thomas Gray and C. Leo Mees; "The Use of Two Mirrors for the Determination of Co-efficient of Expansion in Solids," and "Cause of Periodicity in Thermometers as discussed by Professor W. A. Rogers," by C. Leo Mees; "On Sulphophenylpropionic Acid," by Chase Palmer; "Vapor Densities of the Volatile Metallic 'Halids,'" by P. S. Baker; "Soap Analysis," by John F. Schnaible; "The Carbohydrates of the Sweet-Potato," by W. E. Stone; "Oxidation by Means of the Fixed Alkaline Hydrates," and "Action of Chloroform on Aluminium Chloride," by P. S. Baker; "Specific Re-actions for the Penta-Glucoses," by W. E. Stone; "The 'Perkin's Synthesis,'" by P. S. Baker; "Atomic Weight of Oxygen," by W. A. Noyes; presidential address, by John C. Branner; "The State of the Crater of Kilauea in August, 1889," by O. P. Jenkins; "The Moraines of the Maumee Glacier," by C. R. Dryer; "Probable Future of Petroleum in South-western Indiana," by C. A. Waldo; "Observations on the Lakes of Indiana," by C. R. Dryer; "Some Unusual Forms of Lime Carbonate Deposition," by U. F. Glick; "The Top of the Matterhorn," by David S. Jordan; "The Uses of Infinity and Zero in Algebra," by Rufus L. Green; "Variation in Plants from Unripe Seeds," by J. C. Arthur; "Stone Characters of Nyssa," and "Snake Cactus," by Walter H. Evans; "Distribution of Cornus," by John M. Coulter; "The Plants of Putnam County," by D. T. McDougal; "The Compositæ of Vigo County," by W. S. Blatchley; "Germination of the Macrospores of Isoetes," by Douglas H. Campbell; "Some Structures in Epiphegus," by E. M. Fisher; "Mycorhiza and Epiphegus," by John M. Coulter; "Some Remarkable Floral Variations," by C. W. Hargitt; "Some Stem Characters in Compositæ," by Harry D. Seaton; "Some Indiana Mildews," by M. A. Brannon; "On Some Plants New to the State List," by W. S. Blatchley; "Method of Embedding and Staining Delicate Vegetable Tissues," by Douglas H. Campbell; "The National Herbarium," by John M. Coulter; "Plant Reproduction," by W. J. Spillmann; "The Potable Water-Supply of the City of New York," by A. E. Phillips; "The Effects of Trusts," by Jeremiah W. Jenks; "The Proposed Meeting of the American Association for the Advancement of Science at Indianapolis," by Amos W. Butler. The treasurer will be found at the secretary's desk before the beginning and at the close of each session. Applications for membership will be found at the secretary's desk. These should be filled up with the name of the applicant, signed by two members, and given to the chairman of the membership committee, to be appointed at the meeting.

— The Academy of Sciences of Vienna, as we learn from *Nature*, has appointed Professor G. Niemann of Vienna, and Major Steffan of Cassel, to be present as impartial witnesses at the excavations at Hissarlik, begun on Nov. 25, under the direction of Dr. H. Schliemann and Dr. W. Dörpfeld. Capt. Ernst Bötticher, who has often called in question the utility of Dr. Schliemann's archæological investigations, has been requested to take part in the excavations.

— Among recent appointments of graduates of the Johns Hopkins University may be noted the following: G. H. Harold Ballard (A.B., 1888), instructor in the Washington (D.C.) High School; Gustav Bissing (Ph.D., 1885), principal examiner of Division A, United States Patent Office; Benjamin C. Burt (fellow, 1880–81), docent in historical psychology, Clark University; Florian Cajöri (graduate student, 1883–85), instructor in mathematics, Colorado College; William H. Carpenter (fellow by courtesy, 1881–83), assistant professor of German and the Scandinavian languages, Columbia College; Albert S. Cook (associate, 1879–81), professor of English, Yale University; John D. Epes (graduate student, 1888–89), associate professor of English, Centre College, Ky., George Hempl (instructor, 1884–86), assistant professor of English, University of Michigan; William H. Hobbs (Ph.D., 1888), curator of the Geological and Mineralogical Museum, and lecturer on mineralogy and metallurgy in the University of Wisconsin; Cary T. Hutchinson (Ph.D., 1889), electrician, Sprague Electric Company, New York City; James G. Hume (graduate student, 1887–88), professor of mental and moral philosophy, University of Toronto; J. Edward Keeler (A.B., 1881), astronomer, Lick Observatory; George T. Kemp (Ph.D., 1886), associate director of the Department of Physiology and Experimental Therapeutics, Hoagland Laboratory, Brooklyn, N.Y.; William S. Lemen (graduate student, 1886–87, 1888–89), instructor in biology, Indianapolis High School; Gonzalez Lodge (Ph.D., 1886), associate in Latin, Bryn Mawr College; Otto Lugger (curator of the Biological Museum, 1883–85), professor of entomology and agriculture, University of Wisconsin; Robert W. Mahon (Ph.D., 1882), chemist in the Maryland extension of the Pennsylvania Steel Company, in charge of the laboratory of the company at Sparrow's Point, Md.; C. Carroll Marden (A.B., 1889), instructor in French and German, Norfolk (Va.) Academy; Dice McLaren (graduate student, 1888–89), professor of natural history, Maryland Agricultural College; J. Playfair McMurrich (Ph.D., 1885), docent in biology, Clark University; W. Howard Miller (A.B., 1888), teacher, Centerville, Md.; Charles W. Moulton (Ph.D., 1889), professor of chemistry, Shattuck School, Minnesota; Louis Rettger (A.B., 1888), associate in biology, University of Indiana; Thomas H. Spence (matriculate, 1886–88), principal, Snow Hill (Md.) High School; William K. Williams (Ph.D., 1889), assistant in the Boston Athenaeum.

— In a paper read at a meeting of the American Oriental Society in this city in Octobor last, Dr. Cyrus Adler stated that the modern Jewish synagogue has preserved in its ceremonial the use of the shofar or cornet. This instrument is usually made of a ram's horn straightened and flattened by heat. It is not only the solitary ancient musical instrument preserved in the Mosaic ritual, but is the oldest form of wind instrument known to be retained in use in the world. The mode of sounding it has been handed down by tradition. A portion of the liturgy for New Year's Day (on which it is especially employed) refers particularly to the shofar. The Mishna of *Rosh-hash-shana* (New Year) gives minute directions with regard to this portion of the liturgy. It also furnishes instructions as to the kind of horn to be used. A study of the biblical passages shows that it was employed for religious ceremonies, on the day of the year of release, the new moon, the solemn feasts, and that it would assemble all the children of Israel on the day of judgment. It was principally used, however, as a war signal, to call an army together, give warning of an invasion, sound a charge or a release, announce a victory and the coronation of a king. It is rarely mentioned as a musical instrument. Horns of similar construction, with a simple opening at the end, were used by the Etruscans and Greeks (made in bronze), by the aborigines of Brazil (wood), and by the ancient and modern inhabitants of India and the Africans of the Lower Kongo. Seven specimens of Indian and African horns, of cow's horns, and elephant's tusks, are preserved in the United States National Museum. The conclusions were: (1) The oldest wind instrument was the horn of an animal with a natural cavity and a mouth-piece formed by cutting off the end. Horns which required hollowing came into use later. (2) These horns were originally used as signals in time of danger, and for making announcements in general. (3) Many of these important announcements had a religious character. The antiquity of the instrument caused its permanent adoption for sacred purposes. (4) The shofar, speaking especially of the instrument of that name, was originally a trumpet made of the horn of a wild goat. Its especial sacred character may be connected with the sacrificial use made of the goat. (5) The etymology of the word is to be sought in the Assyrian *sappar*, a kind of wild goat: Assyrian *sappartu* meant originally the horn of a *sappar*, and it may afterwards have been used for horn in general.

— According to the annual report of the Department of Mines of New South Wales, the aggregate value of the mineral products of that colony up to the end of 1888 amounted to £76,818,235. The value of such products for 1888 was £3,879,833. The increase in the output of coal, iron, and antimony for the year was considerable, while there was a decrease in the output of gold and copper. The number of miners engaged in gold-mining was 8,460, who took out an average for each man of only about $180. This would seem a small sum for a year's work, were it not for the fact that

many of the miners are engaged during part of each year in other pursuits. Silver-mining is now carried on in every mining disrict in the colony, but the richest and most extensive deposits are at the Barrier Ranges, in the extreme north-west corner of the colony. These deposits extend over a tract more than a hundred miles long by several miles in width. Among other minerals, cobalt, plumbago, and bismuth have been discovered in paying quantities, and are being mined to some extent.

— One of the largest engineering firms in England has undertaken the manufacture of aluminum on an extensive scale by the new Maussier process. This process comprises three distinct periods and kinds of operations, — the desilification, the reduction, and the liquation. The desilification is effected by means of fluorine or fluoride of calcium at a high temperature in the presence of carbon. Lime, or the carbonates of potassium or sodium, may be added to facilitate the decomposition of the silicate. The reduction or expulsion of the oxygen is obtained by means of iron and manganese raised to incandescence in the presence of carbon. The liquation, the object of which is to separate the aluminum from the iron and manganese, is effected by dropping the molten mass into carbon ingot moulds. These moulds are made of wood charcoal. The aluminum so obtained is said to be nearly pure.

— In a paper read before the Johns Hopkins University Philological Association, Nov. 15, 1889, by Leon ibn Abi Suleimân, it was said that American and European scholars who have come in contact with educated Arabs are much surprised to see how well they are informed in regard to European languages, history, and literature, and how little they know of their own native language and its literature. Nor is this wonderful, if we consider the manner in which Arabic is studied by the modern Arabs. The weak points are the incapacity of most of the teachers, and the very imperfect methods they employ, and also the great desire of every Arab to imitate the Europeans, especially the French, as closely as possible, not only in language, but also in dress and mode of life. It is in Syria, especially in Beirut, that the study of Arabic receives more attention than in any other part of the East. Beirut is situated 57 miles west-north-west of Damascus, the capital of Syria, and has about 90,000 inhabitants. Of those, 50,000 are Christians, mostly from the Lebanon Mountains, 4,000 Jews, and the rest Mohammedans. Science and literature are in the hands of the Christian population, whose number daily increases by immigration from the Lebanon Mountains and the adjacent districts. The city of Beirut is widely known as an educational centre, is resorted to by students from all parts of the East, and the pedagogical methods prevalent in its schools may be fairly assumed as representative. Every religious denomination maintains at least one school, where instruction is given either free or for a merely nominal fee. Such schools are frequented by the large middle class. When the Arab leaves his village and comes to the city of Beirut to go to school, he for the first time puts on his red shoes, or rather slippers, which he has hitherto carried carefully under his arm while walking barefooted to church on Sundays. This is his first step toward enlightenment. Having once entered the school, his only desire is to learn French, which is taught in every school; and, were it not that he is obliged to study Arabic, he would certainly not do so. His dislike for this study increases owing to the exceedingly dry and uninteresting manner in which he is taught. After spending nearly two years in learning the alphabet and spelling, he spends three years more in reading the Bible, and all the while no attempt is made to explain to him a single word that he does not understand. Thus far, at least, he in a measure follows what he is reading; but afterwards, when selections from old Arabic poetry are given him to read, his task becomes monotonous in the extreme; for now he does not know whether he is reading Arabic, Turkish, or Persian, and his teacher is absolutely unable to enlighten him, as he himself does not comprehend the meaning of a single passage. We must bear in mind, however, that modern Arabic is just as different from the classical language as modern Greek from classical Greek. After learning to read Arabic poetry fluently, the student enters a class in which the grammar is taught, learning by rote without understanding a word. Writing, like reading, is taught mechanically, and much importance is attached to the acquisition of a good hand. When this has been acquired, the student is given, every two or three weeks, a letter to copy, and thus learns the art of letter-writing. After this he leaves the school, but continues his French and English studies. By this time he has exchanged his *saraweel* for a French suit, addresses his friend "*Ya mon cher*," and tries to speak French whenever he can find or make opportunity. The upper classes, of course, study on a better basis. They usually attend the excellent private schools and colleges with which Beirut is well provided. The foremost of those, and the oldest, is the Madrasat-al-Bustani, the academy of the late Butrus Bustani, the editor of the famous dictionary "Muhit-al-Muhit." This school, the American College, and the University of the Jesuits, are considered the best. But in these also, European languages hold the foremost place, and students desiring of devoting themselves to the study of classical Arabic do so privately after leaving college, studying the Koran, not taught in any school, the old grammarians, even now the best, and trying to imitate in their writings the language of the Koran, so pleasing to the ear of the cultivated Arabic scholar. Such men form the several literary societies, among which the Zahrat-al-Adâb is the most prominent. But few Arabs can be said to possess a fair knowledge of their own literature. The example, however, of those who devote themselves to this study is beginning to be felt, and the system of the schools is daily becoming better. Nevertheless it will be long before the study of Arabic in the East will be established on a true scientific basis.

— At a recent meeting of the American Oriental Society, after a brief introduction describing the opinions held by various scholars that there was a connection between the aborigines of China and Mesopotamia, an account was given by Dr. Cyrus Adler of a paper by Mr. Yonekichi Miyake, in a Japanese literary journal, in which he compared an ancient golden banner preserved at the celebrated Buddhist temple Horinji, in the province of Yamato, Japan, with designs on Assyrian and Hittite monuments. The conclusion of the author is, "that there once existed inter-continental communication in Asia, and that the Assyrian art was introduced into China probably through Persia and India. Although Japan is entirely separated from the continent, it came under this influence, by way of China, about 1000 years ago."

— A correspondent of *Garden and Forest* sends the following note upon *Magnolia glauca* in its isolated northern station in Essex County, Mass.: "Magnolia Swamp contains several hundred acres, and it is one and a half miles in length and from ten to over one hundred rods in width. I am of opinion that this swamp has furnished the shrub to all the others. In regard to three of the smaller swamps, I know that this is a fact, the magnolia shrubs having been transplanted by men. The inhabitants of Gloucester are firm in the belief that *Magnolia glauca* is a native shrub, but I cannot think so. I believe it was introduced by the old settlers, some of whom may have lived in and removed from a more southern State. 'The old Salem road,' deserted by the travelling public for over a hundred years, skirts the eastern side of Magnolia Swamp. Along the line of this road are the ruins of old cellars, and in the swamp opposite one of the cellars, near a spring, may be found magnolias which appear the oldest in the region. The root-crowns below the moss are often found to be two feet in diameter. In no other place can I find such a growth, and it is here, I think, that the shrub first started. It must be evident to any careful observer that *Magnolia glauca* is struggling here in an unnatural climate. The primary roots grow straight down into the muck, and in the fall are thickly covered with rootlets snowy white in color. In the spring these rootlets are mostly dead, and a greater part of young shoots die down to the moss, and a certain per cent of the old plants are winter-killed, which indicates that there is no harmony between shrub and climate."

— The fruit of the Japanese persimmon or kaki can still be found in the markets of this city in great abundance, and of extraordinary beauty and excellence. It is raised in Florida and Georgia, where the kaki has been planted in large quantities. According to *Garden and Forest*, it is by far the handsomest dessert fruit which the market affords at this season of the year; but it is a question

whether the kaki really possesses as good a flavor as one of our thoroughly ripened and frosted native persimmons from Georgia or Virginia, a fruit which some people consider about the best that grows. A cross between the American and Japanese species might be expected to produce a fruit of larger size and finer color than that of the former, and with a richer flavor than any of the cultivated forms of kaki. The Asiatic persimmon, according to Rein, is "undeniably the most widely distributed, most important, and most beautiful fruit-tree in Japan, Corea, and northern China. In Japan it endures night frosts at a temperature of from 12° to 16° C. It can be cultivated high up in the valleys, and far beyond the limit of the bamboo cane. It is a stately tree, after the fashion of a pear-tree, with beautiful deciduous leaves, almost as large as those of some magnolias, but of bright green color, and resembling those of the pear in shape only. The new leaves come in May. It blossoms in June. The season of ripe fruit is late in autumn, from the middle of September to the end of November. There are many kinds of kaki, ranging in size from a small hen's egg to a big apple. Some are nearly spherical, others oblong, others heart-shaped. In color of the outer skin, they run from light orange-yellow to deep orange-red. They are distinguished also by their taste, which is pleasant in its way, and reminds one of tomato, as does the color also. They are not only eaten in a soft, doughy condition, in which those of the Migako-no-djô, in the province of Hiuga, are prized most highly, but the fruit is gathered while still hard, to ripen afterward. The best in Japanese estimation are *Tarugaki*, that is, 'tub persimmons,' which have been converted from astringent into sweet fruit by being kept in an old saké tub. The bitter, astringent taste of all green kaki remains, even in the ripe fruit, in the case of most varieties; and it is from these that, during the summer, an astringent fluid, rich in tannin, is prepared (called Shibu), — an acid of considerable importance in several industries. When over-ripe and dried in the sun, pressed somewhat flat, and then put away in boxes, the sweet kaki get to look and taste in a few months, when skinned, like dried figs, and are used like them. The white powder which covers these dried persimmons in boxes is natural sugar that has exuded from the fruit. In September the kaki-tree, laden with a large, orange-colored fruit, is a great ornament to the landscape. This beauty it preserves till it loses its leaves in October."

—The great utility of the electric light on vessels passing through the Suez Canal is shown by the fact that during the year 1888 the average time occupied by vessels in passing through was 37 hours 57 minutes, when the boats in question were not fitted with the electric light, and 22 hours 32 minutes for those vessels so fitted, which are then able to proceed at night. The saving effected in the time of transit is therefore very considerable, and the use of the electric light is rapidly spreading. During the first three months of the year 295 vessels thus fitted passed through the canal, but during the last three months the number had increased to 519.

— On Wednesday evening, Dec. 11, a preliminary meeting was held at St. Paul, Minn., for the purpose of organizing a scientific society. A few years since, the St. Paul Academy of Natural Sciences was totally destroyed by fire, losing a valuable library and museum. From this loss it has never recovered, a subsequent effort to renew its operations not meeting with success. It is exceedingly gratifying now to note that the present movement develops unexpected strength, and from a larger number than ever before. A chairman and secretary, with a committee of twelve, were named to draught articles of organization and report early in January, when several hundred memberships are expected. It is also interesting to note, that, in connection with the work usually planned for an institution of this kind, the idea of forming a series of classes in different branches of science, with special reference to elementary and practical study, seems to receive unanimous support. This will be substantially the same scheme as the "University School Extension System," which is producing handsome results.

— The American Historical Association will hold its sixth annual meeting, Dec. 28–31, in the city of Washington, D.C. The evening sessions will be in the lecture-room of the Columbian University, 15th Street, where the association met during the Christmas holidays last year. The morning sessions will be in the lecture-room of the National Museum, by permission of the Board of Regents of the Smithsonian Institution. The recent incorporation of the association by Congress, and the relation now established between the society and the Smithsonian Institution, make it especially desirable that the members should convene again in the Federal city. The headquarters of the association will be at The Arlington, where accommodations are promised to members of the association at reduced rates. Members are expected to make their own arrangements at this hotel or elsewhere. Round trip tickets from New York to Washington, *via* the Pennsylvania or the Baltimore and Ohio Railroad, are sold in New York for ten dollars. The advantages of Washington as a meeting-place for a national historical society are very obvious. The attractions of the capital in winter, the opportunity of easy access to public record offices and the Congressional Library, the general interest of the government buildings, the National Museum, etc., — all combine to make a visit to Washington at once a pleasure and an advantage to students of American history. The holiday season was chosen by the committee on time and place, because it is generally convenient for members, and it is easier at that time to obtain good hotel accommodations, Congress not being in session. There will be time in the afternoon hours for members to engage in private conference, in visiting, or sight-seeing, for the literary exercises are restricted to morning and evening sessions. One of the great advantages of this annual meeting of the association is the opportunity for members to meet one another in a social way, and to discuss matters of common interest. Special courtesies will be extended to the association by the Cosmos Club and by the Hon. Horatio King of Washington, D.C. The programme is as follows: Saturday, Dec. 28, "The Literature of Witchcraft," by Professor George L. Burr, Cornell University; "The Journalism of the French Revolution," by Ex-President Andrew D. White, Ithaca, N.Y.; "The French Revolution in San Domingo," by Herbert Elmer Mills, instructor in history, Cornell University; "A Newly Discovered Manuscript, 'Reminiscences of the American War of Independence, by Ludwig, Baron von Closen, Aide to Count de Rochambeau,'" by Clarence Winthrop Bowen; "Recent Historical Work of the Universities" (inaugural address), by Charles Kendall Adams, president of the American Historical Association; "Historical Survivals in Morocco," by Talcott Williams of Philadelphia. Monday, Dec. 30, "The Origin and Early History of our National Scientific Institutions," by Dr. G. Brown Goode, assistant secretary of the Smithsonian Institution; "The Development of International Law as to Newly Discovered Territory," by W. B. Scaife; "The Impeachment and Trial of President Johnson," by Dr. William A. Dunning, Columbia College, New York; "The Trial and Execution of John Brown," by Gen. Marcus J. Wright, War Records Office, Washington; "A Defence of Congressional Government," by Dr. Freeman Snow of Harvard University; "The Economic and Social History of New England, 1620–1789," by William B. Weeden, president of the Brown University Historical and Economic Association; "Correspondence of the Pelham Family and the Loss of Oswego to the British," by William Henry Smith, Associated Press, New York; "Early History of the Ballot in Connecticut," by Professor Simeon E. Baldwin of the Law Department, Yale University; "Certain Phases of the Westward Movement during the Revolutionary War," by Theodore Roosevelt, civil service commissioner. Tuesday, Dec. 31, "Bacon's Rebellion," by Edward Eggleston; "The Constitutional Aspects of Kentucky's Struggle for Autonomy, 1784–92," by Ethelbert D. Warfield, president of Miami University, Oxford, O.; "Facts from the Records of William and Mary College," by President Lyon G. Tyler, Williamsburg, Va.; "Materials for the Study of the Govment of the Confederate States," by John Osborne Sumner, A.B., Harvard University; "Notes on the Outlook for Historical Studies in the South," by Professor William P. Trent of the University of the South, Sewanee, Tenn.; "Report on the Bibliography of the American Historical Association," by Paul Leicester Ford of Brooklyn; "The Spirit of Research," by James Schouler of Boston; "The Perils of Historical Study," by Justin Winsor, librarian of Harvard University; "The Government as a Guardian of American History," by Worthington C. Ford of Washington.